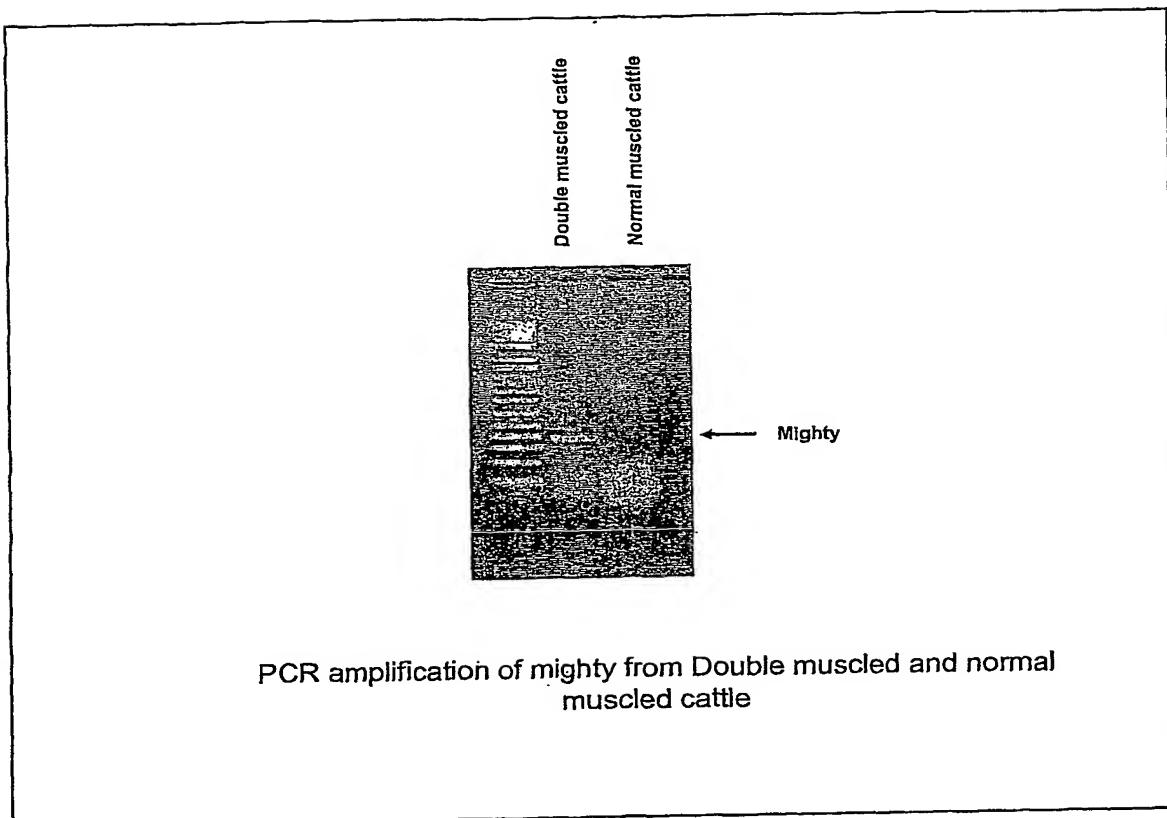


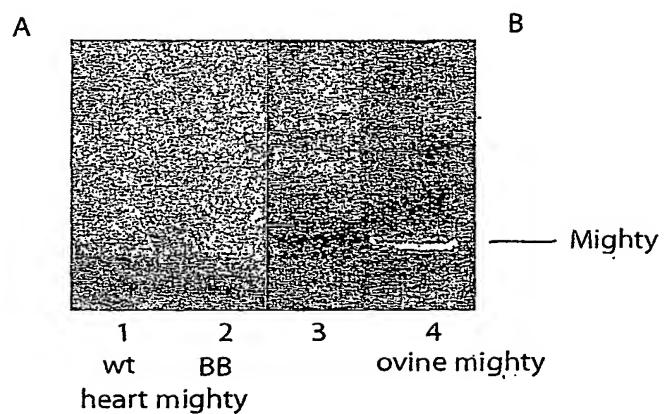
1/28



**FIGURE 1**

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2/28



Lane 1 PCR amplification of mighty from wild type bovine heart  
Lane 2 PCR amplification of mighty from Belgian Blue bovine heart  
Lane 3 1 kb plus DNA ladder  
Lane 4 PCR amplification of mighty from ovine skeletal muscle

**FIGURE 2**

3/28

CCACATTCACTGTGCAAGTCGTGGGAATACAGATGAATAAAGGCTCCTGTTATTCTCAAGGAATGTATG  
 GTTTGAAGCACAGTTAGACATATATTCAAATTACAGCTCCTCTTAAACACTAATATTCCAAGGCACAC  
 TCAATGTTTAAAGGATCACAGAGTACCAAGCACGTAGCAAAACCTACTAAGAGAGGTGTGTTAAA  
 ATGACTACCCAAGGGACATACTTTCAAGTCTAATCGTTCACTTGGATCTGTTATACCACAAGAAAAC  
 AATTTACTTGATGCTCTTAGTCCCCTTAAGGCTTAAAGGCTTATTACATCATTTGTTCTAATAAGTCAT  
 GACAGTCTACCTTGGATTAAAGTGATACACAAATGATGGTCTGTCCTCTGGTGAACGGTCC  
 TATTACATCATGACTATGGTTCATTTCTTAGCCTCAAGAACGCTCAGAACACTGAATTAAA  
 TTCAGTCATTACCAAGGAGGAGGAGTTTTAAAAACTCTAATGTTATTCTAGATT  
 TTAGTTAAACCACGTTACATCTATATTGACAATAAATGTGCTAAATAACTAACATGGTAATGTGCCTA  
 GGGAGGCTTGAATCCAATATGGCAAAACAAACAGAAAACAGCAATTGGTATGCTGTGCTTATT  
 TACAGAAATAAATGTGAAAGTATATGACCTATGTTATGATCTTAAAGAGTTGTAGAAACGGAAGAGGACTC  
 AGAGAAAAGCAACCAAAACGAACAGGAGGAGAAGGAAGAGGGCGAGAAGGAGGAG  
 TGCTTTATTGCTAACCCCAAGTGTGTTGAAGTACTGTGACGCAATTAGAAATGAGTAT  
 CTAATTTGGACTGTTCTAGAAAAATCTGTTACAGAGATAATGTTAAAGCCAGATTACAGGAATCACAGCA  
 CTAATATACAAATAATTACAGAAAGGCTTGAATGTGGAGGTGTTCTGATGACTCTATTGATGTATTGA  
 AAGCACTGGAGTTACTCCCCAGGAAAATTACAACCAAGAGTCCCTAAAGCAGAACCTCCCTGTTCTATTCA  
 TTTGCTGAATATCAAAGCATTTCCAGCCAACAGTACGGCAATTGACCGAGGAAGAACCCCTGGTA  
 TCTGAGTTGCCAAGTCGGATGAGGAAGCCAACCTGAGTTCTGGTAGGATTGTTTTGGTTTTTCTTT  
 TCACTTGGTTAGACAGTTAACCCAGTGAAGACTCAAGACAAAATCCTTGATAACCCCTT  
 ATCCTTTTGCCTAACACATATCCATTAGTGTGATCCGATTAATGGCCGGTC  
 CATTGTAACACACCTCCCTCAATTGCTGAGGTTCTGGTGGATTAAATAAGTCTATCC  
 TTAGATAACCCGGTATGTTGTGAAGATTCTGGACTCAAGACAAAATCCTTGATAACCCCTT  
 TCTTTATCGGTACGCCAAGGGACCCGGGTCTCCAGGGTCTCCAGGGTCT  
 CCATGGGGCGAGCCAGGCTCGCGGGCTC  
 GGGGGACCCCGTGTACGTCAAGGAGGGGGGG  
 GCTTGGCTTGGGAGCCGTAGGTGAAGAGTTGGATC

Various transcription factor binding sites:

Ebox

AP-1

E4BP4

GC box

E2F

FIGURE 3A

4/28

CCACATTCACTGTGCAAGTCGTGGGAAATACAGATGAATAAAGGCTTCTGTTATTCTCAAGGAATGTATG  
 GTTTGAAAGCACAGTTAGACATATATTCAAATTACAGCTTCTCCTTAAAACACTAATATTCCAAGGCACAC  
 TCAATGTTAAAGGATCACAGAGTGACTACCAAAGCACGTAGCAAAACCCTACTAAGAGAGGTGTGTTAAA  
 ATGACTACCCAAGGGACATACTTTCAAGTCTTCTAATCGTTCACTTGGATCTGTTATAACCAACAAGAAA  
 ACAATTACTGATGCTCTTAGGTCCCCTAAAAAATAACCATCGTAAGTGGCTTCTGTCCTGGCTT  
 TATTGAACATAGAAACAGCCATGCAAGCGGTCTAAAGGCTTATTACATCATTGTTCTAATAAAGTCATG  
 ACAGTCTACCTTGGATTAAAGTGATACACAAAATGATGGTCTGTGTCCTCTGGTGAACGGTCCATTCAG  
ATAAACACCTATTCACATGACTATGGTTCATTTCTTAGCCTCAAGAAGCTCAGAACTGAATTAAAT  
 TCAGTCATTACCACCAAGATAATTGTGAGTTTTTTAAAAAACTCTAAATGTTATTCTAGATT  
 TAGTTAAACCACGTACATCTATATTGACAATAAATGTGCTAAAATAACTAACATGGTAATGTGCCAG  
 GGAGGCTTGAATCCCAATATGCCAAAACAAACAGAAAACCAGCAATTGGTATGCTGTCTTATATT  
 ACAGAAATAAATGTGAAAGTATATGACCTATGTTATGATCTTAAAGAGTTGTAGAAACGGAAGAGGACTCA  
 GAGAAAAGCAACCAAAACGAACAGGAGGAAGGAAGAGGCCGAGAAGGGAGGAAGATTGGAGATAGT  
 ATGCCTTATTGTCTACCCAACTGTGTTGAAGT\_ACTGTGACAGCCATCTGGCAATTAGAAATGACTA  
TCTAAATTTGGACTGTTAGAAAAATCTGTTACAGAGATAATGTTAAAGCCAGATTACAGGAATCACAGCC  
ACTAATATAAAATAATTACAGAAAGGCTTGAATGTGGAGGTGTTCTGATGACTCTATTGATGTATTG  
AAAGCACTGGAGTTACTCCCCAGGAAAATTACAACCAGAGTCCCTAAAGCAGAACCTCCCTTTCTATT  
ATTGCTGAATATCAAAGCATTTCAGCCAACAGTACGGCAGAGAATCTGATTGACCCGAGGAAGAACCA  
GTCTGAGTTGCCAAGTCGGATGAGGAGCCAACTGCCAAATCAGCTATCAGGGAAAGTCCTAACACCTGG

TATCACTTGGTTAGACAGTTAACGCCAGTGAGTTCTGGTAGGATTGTTGGTTTTCTCTTCTATT  
 TAATCCTTTTGCFTAACACATATCCATTAGTGATCCGATTAATGCCGGTCATCTATCCCCAAAATACA  
 TTCATTTGTAACACACCTCCCTCCAATTGGCCATGATTGACAGGGTCTGGATTAAATAAAGTCTAT  
 CCTTAGATAACCCGGTTATGTTGTGAAGATTCTGGACTCAAGACAAAATCCTTGATAACCTTTAGAA  
 TCACCTCTTTATCGGTACGCCAAGGGACCCGGCTCCAGGGTCTCTCCAGGGTCTCTCCATCCCCGCCCCGAG  
CCCCCTGCCGCGCAGGTGCGAAAGACCTCCCAGGCCACTCCGGCAGAGAGCGTGAAGGGGGGGCCCTGGGA  
GGGGCGGGGGCGGGGGTGTGCTAGGCGACCACGCTCTCCGCCAGACCGGCCTACTTCTCCGCAGGGGGCG  
CCATGGGCCGAGCCCAGGCTCGCGGCCCTCCGGATGGCCCTTCCGACTCTCTCCCCCTGTGCCGGCGG  
GGCGCACGCCGTGACGTACAGGAGGGGGCCAGCGGGCTGCCAGGGTGCCTGGAGGCCATTGGAGCGG  
CTTGGCTTGGAGCCGTAGCTGAAGAGTGGATC

Various transcription factor binding sites:

MZF1

AML-1A

Sp1

E47

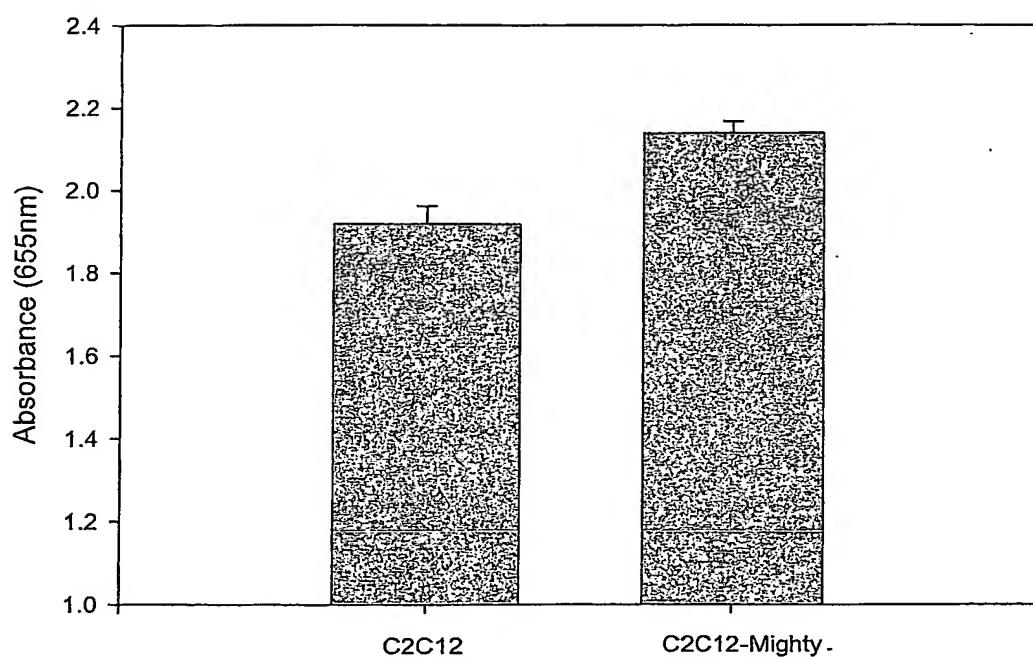
MyoD

NF-kap

FIGURE 3B

5/28

C2C12- Mouse Mighty Clone Proliferation Assay  
72 hrs Proliferation



**FIGURE 4**

6/28



Mighty over expressing  
C2 Myotubes



Control C2 Myotubes

FIGURE 5

7/28

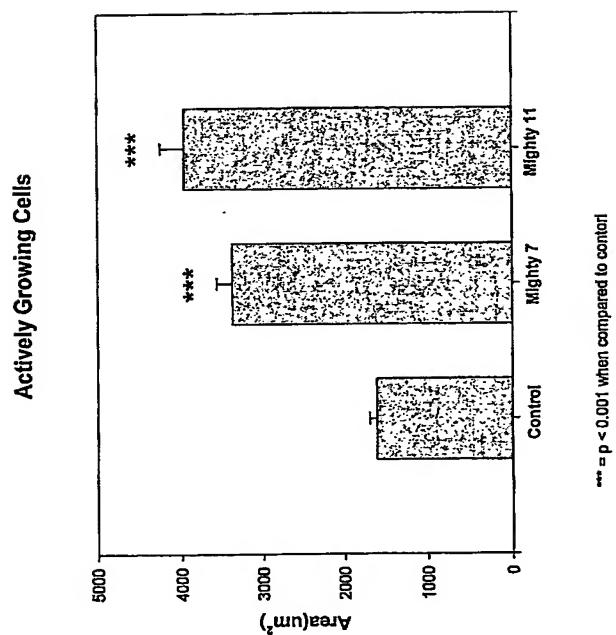


FIGURE 6A

8/28

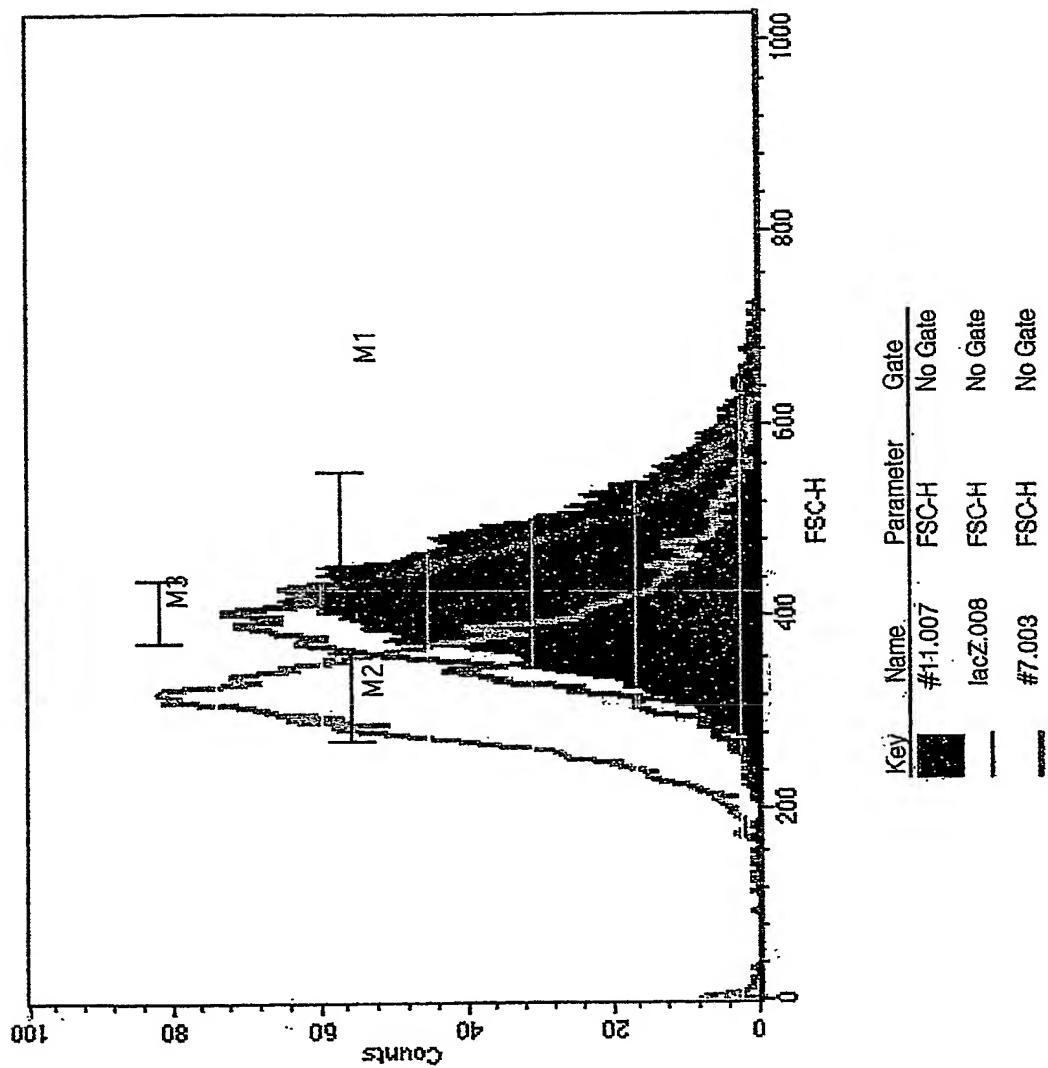
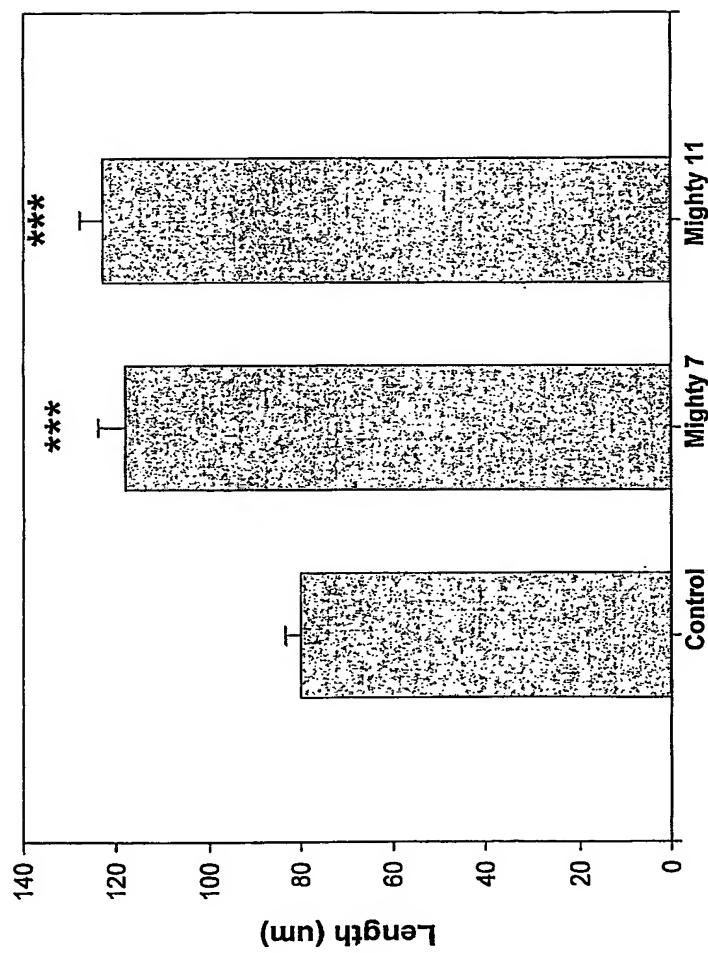


FIGURE 6B

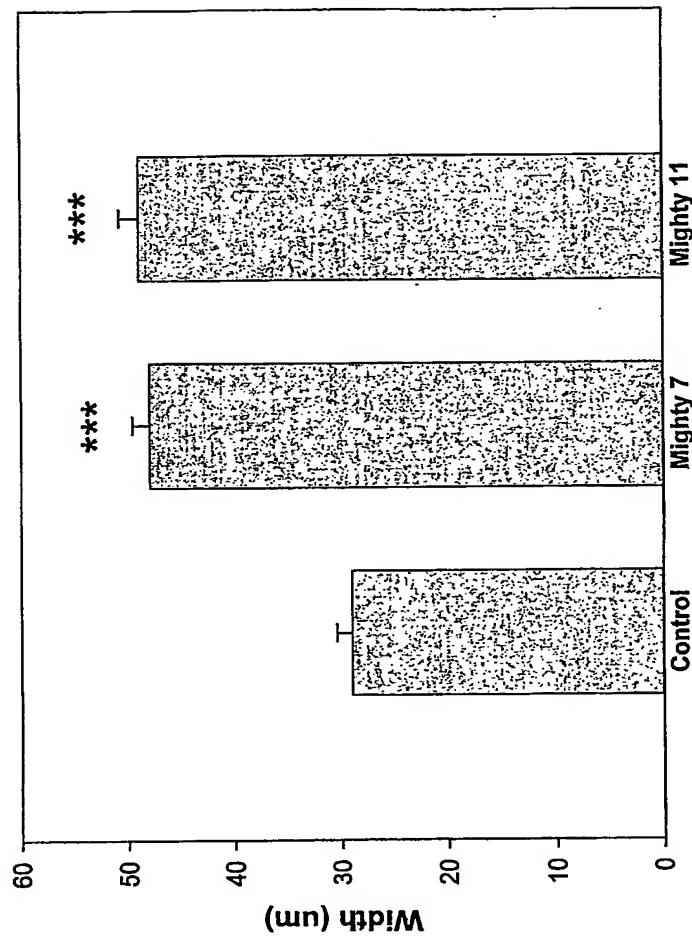
9/28

**3 Nuclei Myotube Length**

\*\*\* =  $p < 0.001$  when compared to control

**FIGURE 6C**

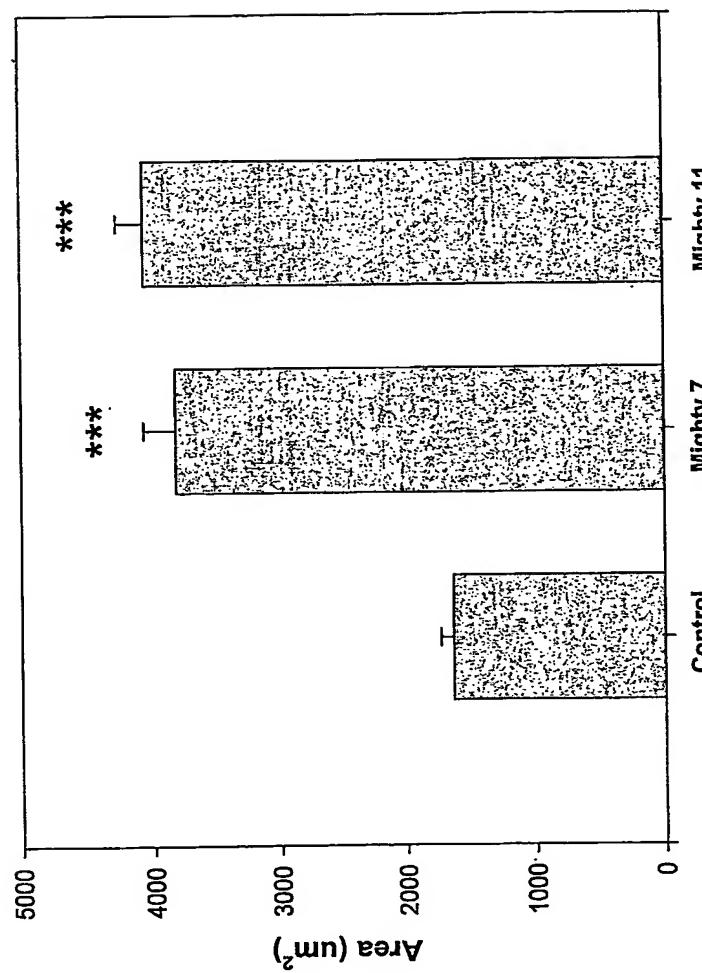
10/28

**3 Nuclei Myotube Width**

\*\*\* =  $p < 0.001$  when compared to control

**FIGURE 6D**

11/28

**3 Nuclei Myotube Area****FIGURE 6E**

12/28

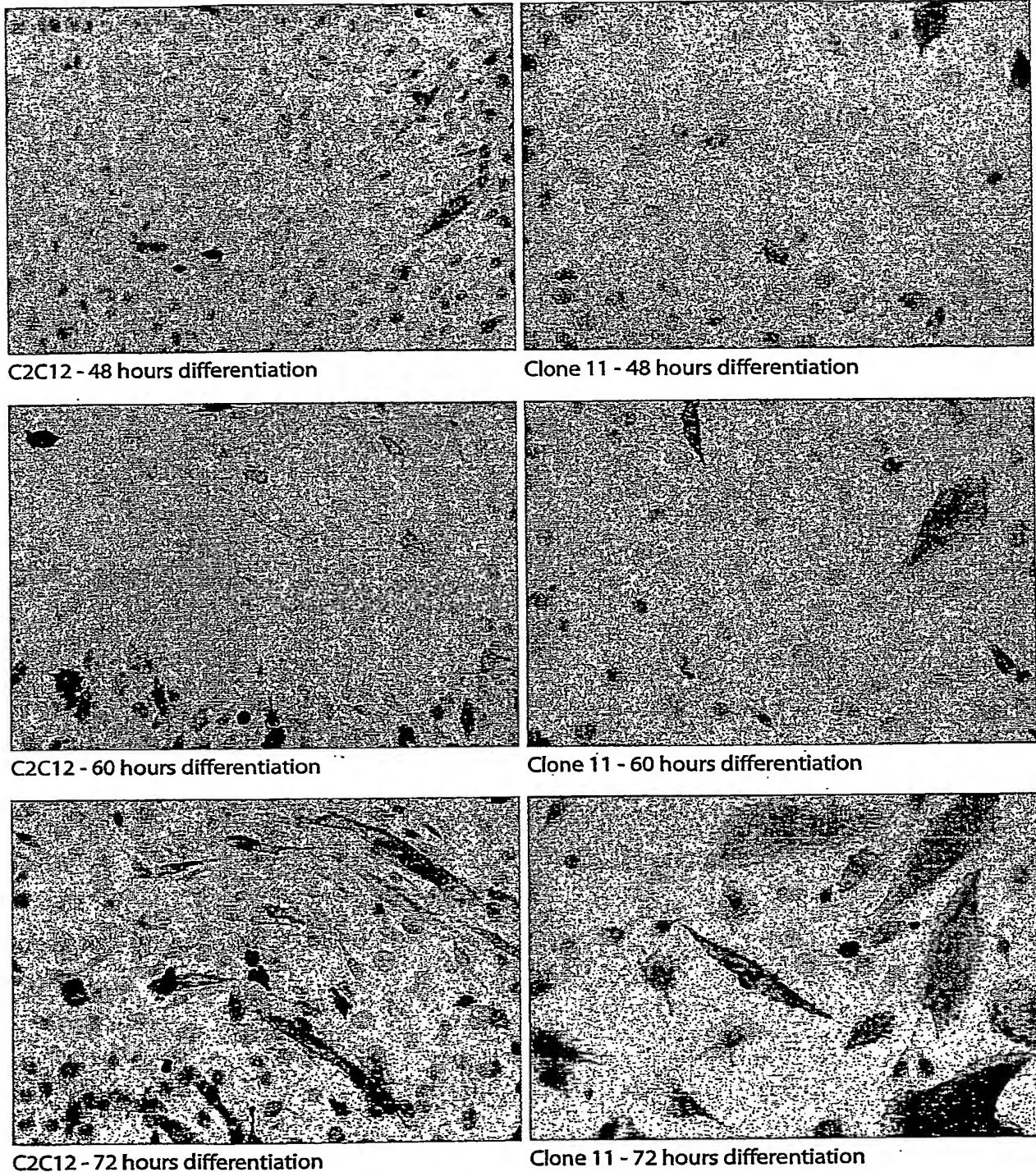


FIGURE 7A

13/28

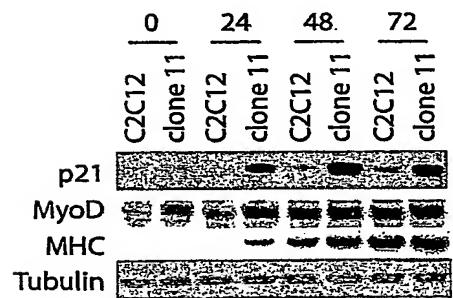
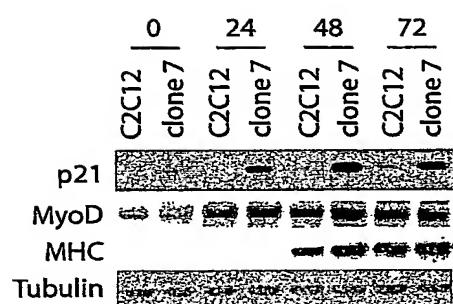
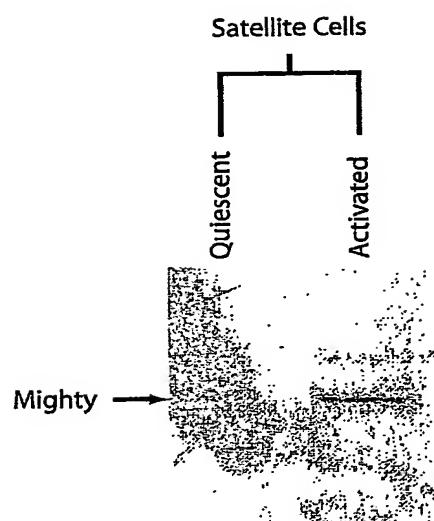


FIGURE 7B

14/28

**FIGURE 8**

15/28

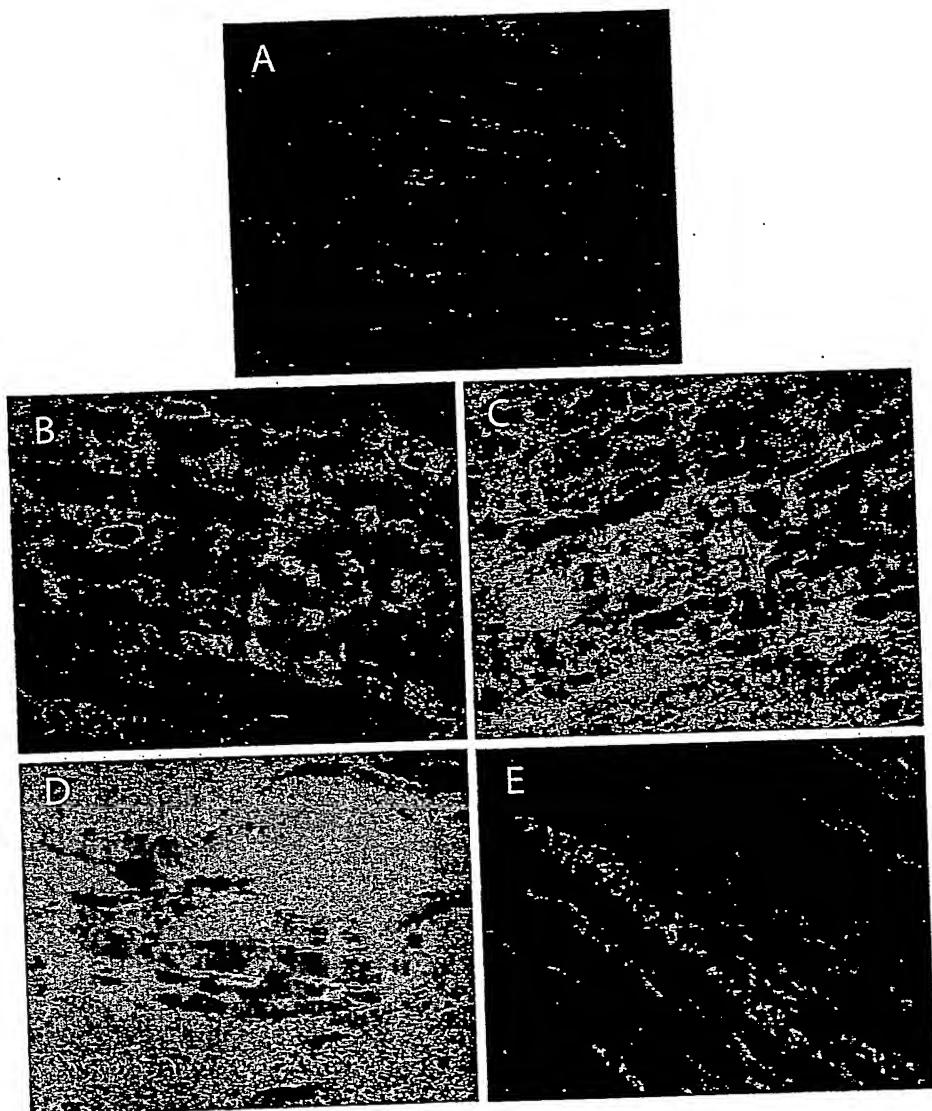


FIGURE 9

16/28

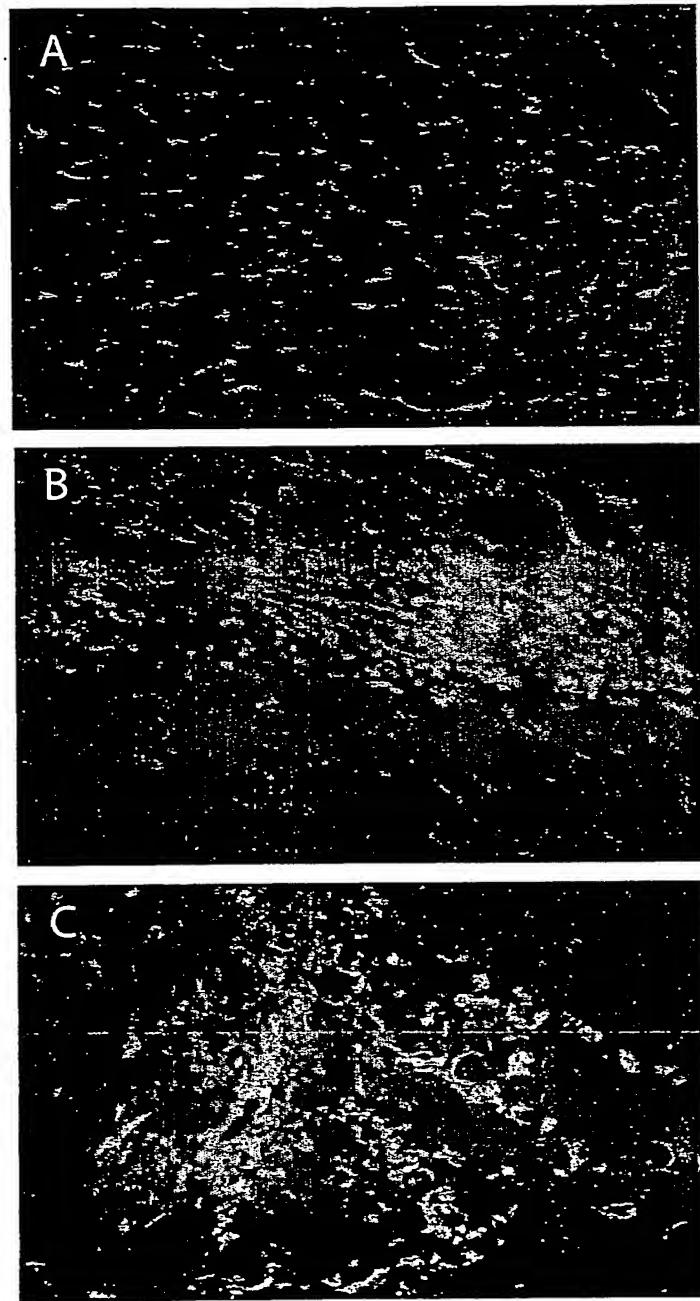
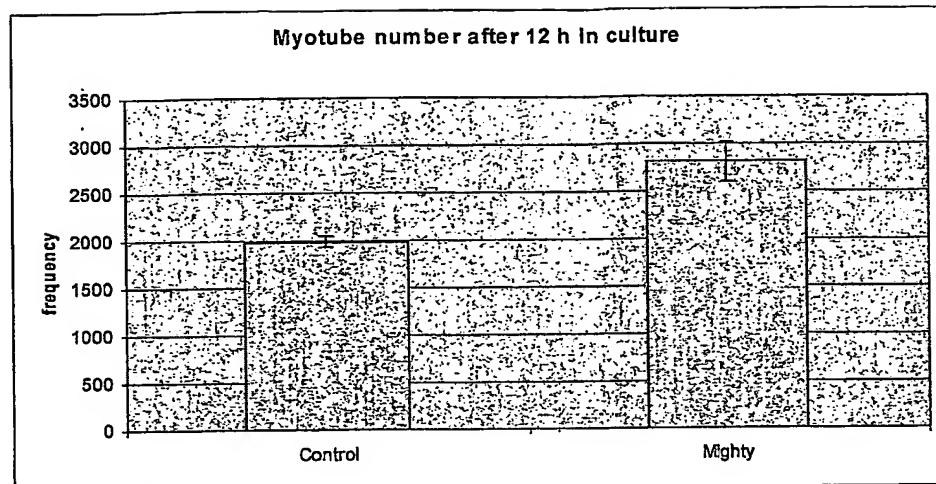


FIGURE 10

17/28

**FIGURE 11**

18/28

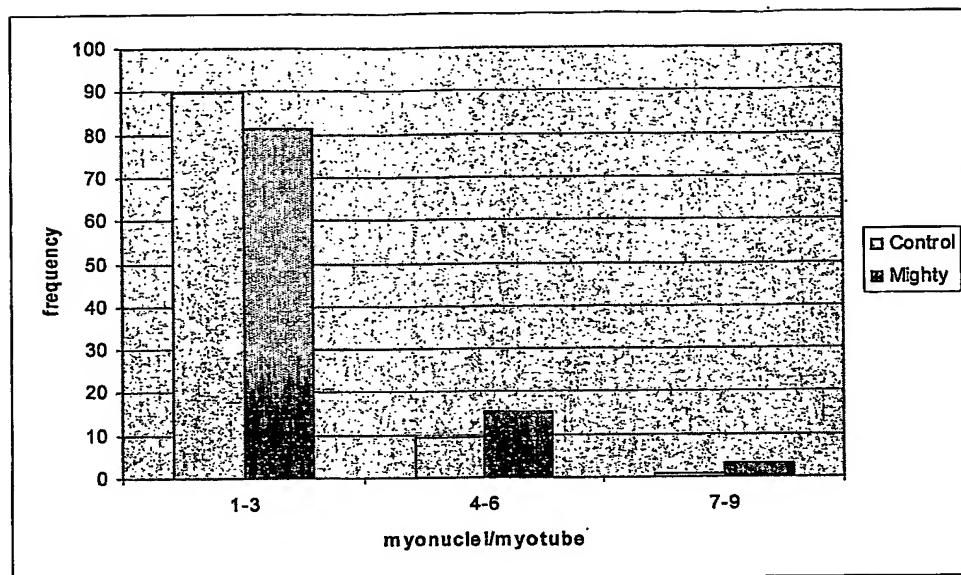


FIGURE 12A

19/28

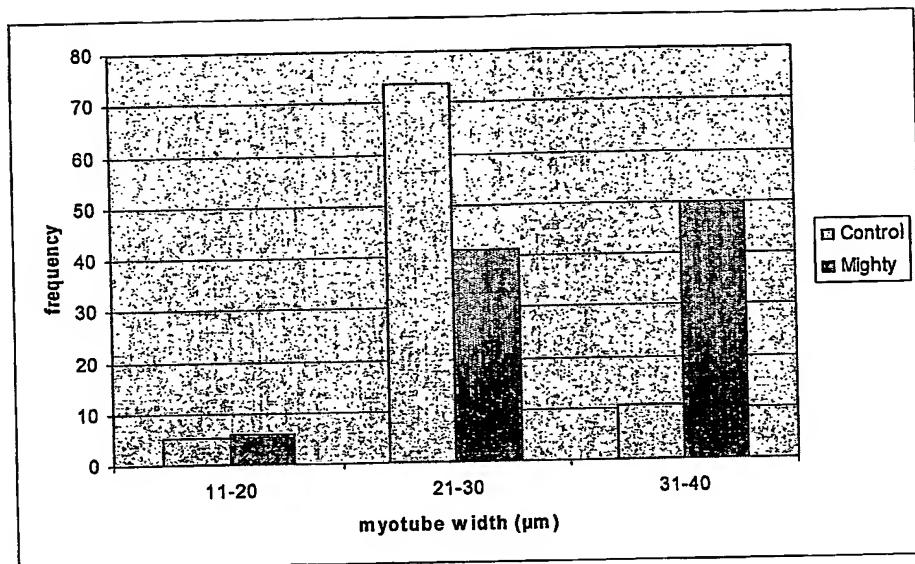
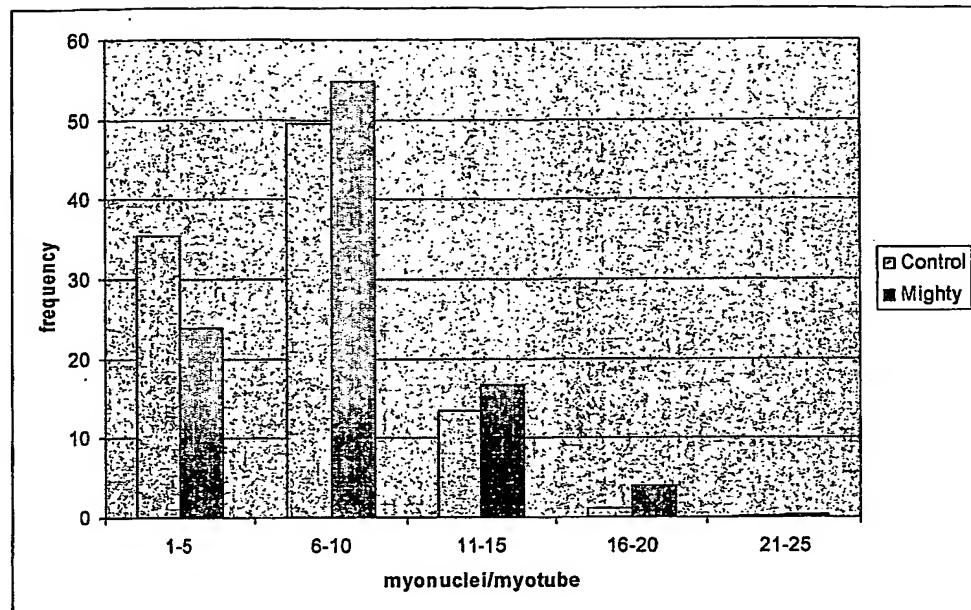
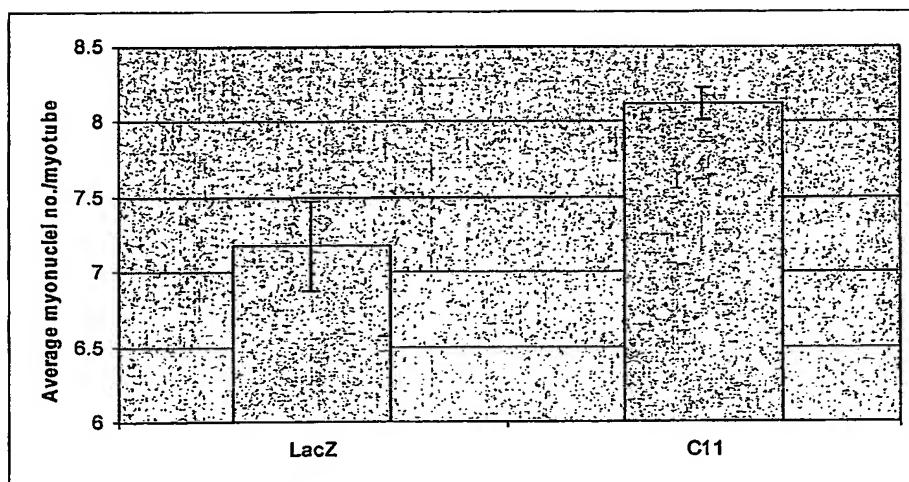


FIGURE 12B

20/28

**A****B****FIGURE 13**

21/28

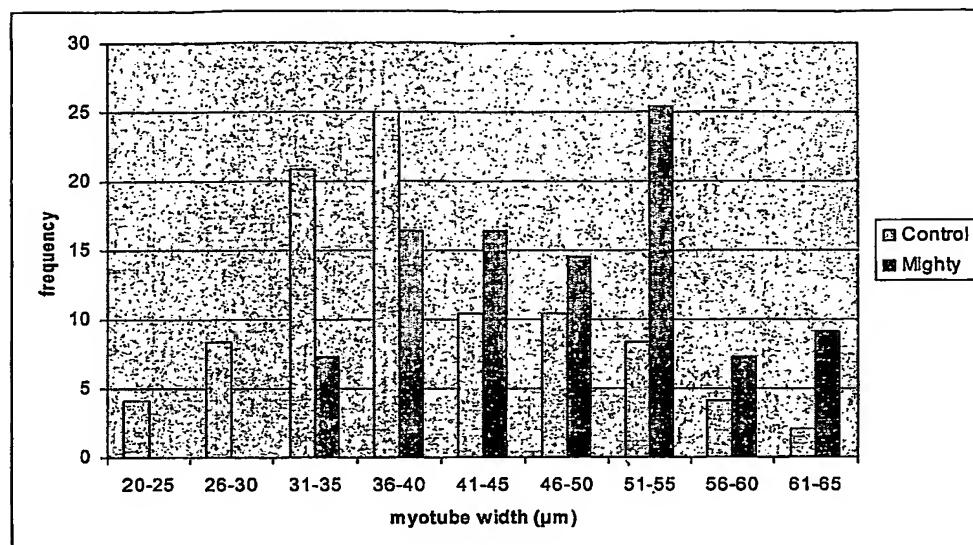
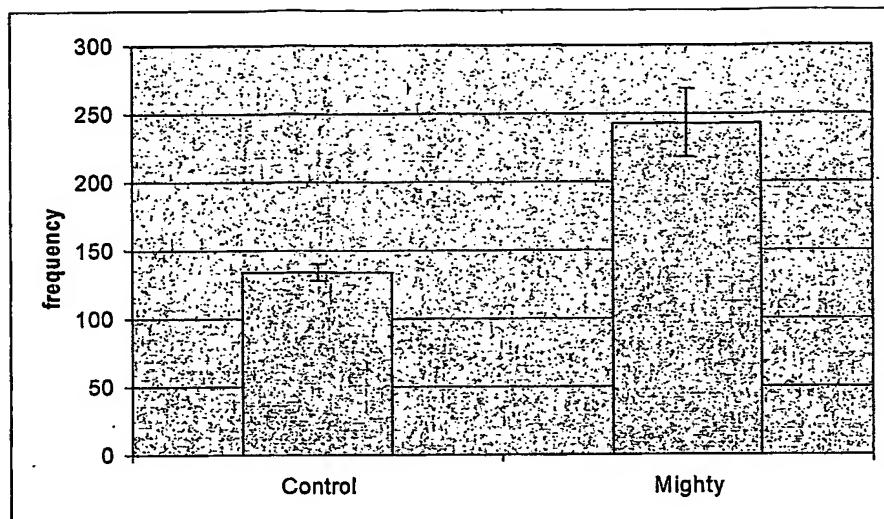
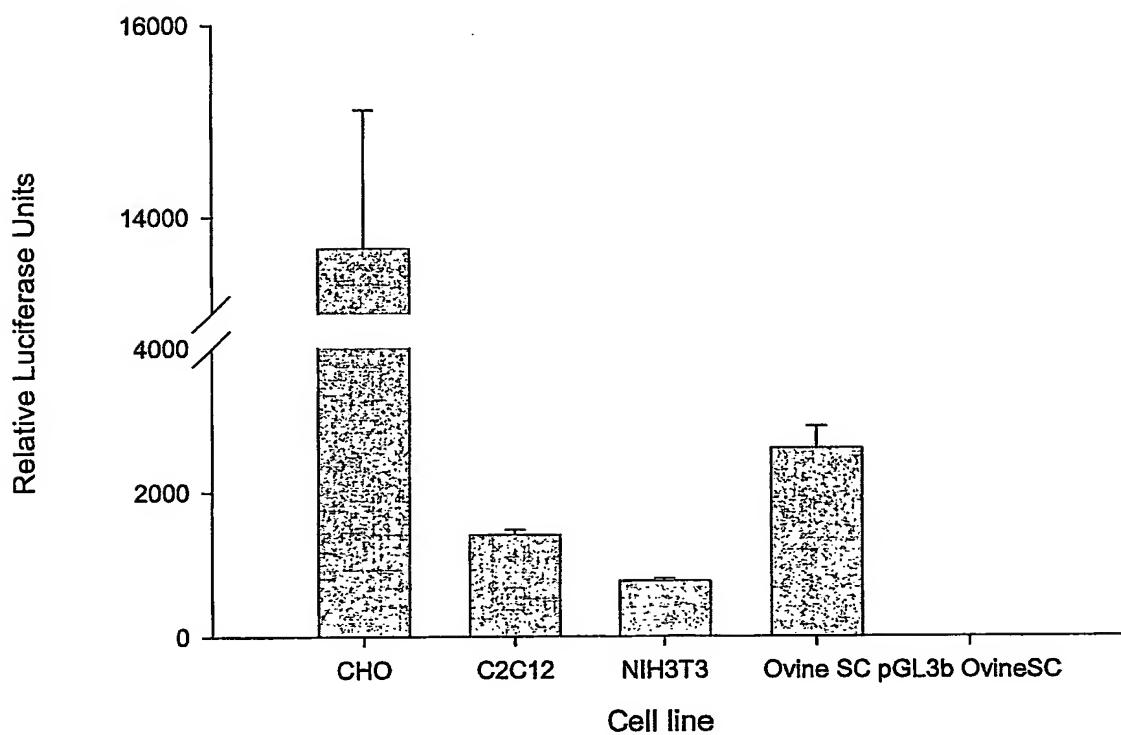


FIGURE 14

22/28

**FIGURE 15**

23/28

**Luciferase Activity of the 1kb mighty promoter in different cell lines****FIGURE 16A**

24/28

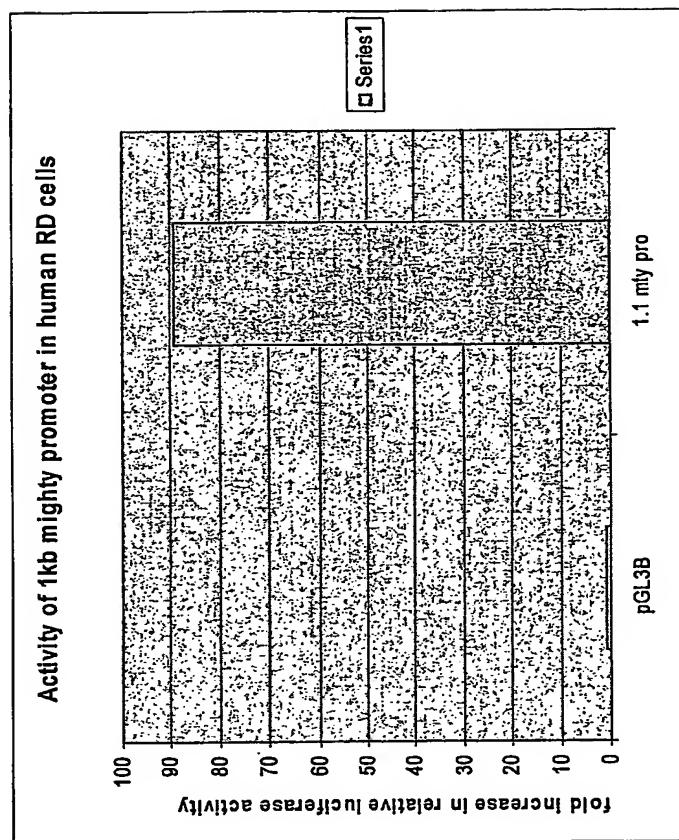
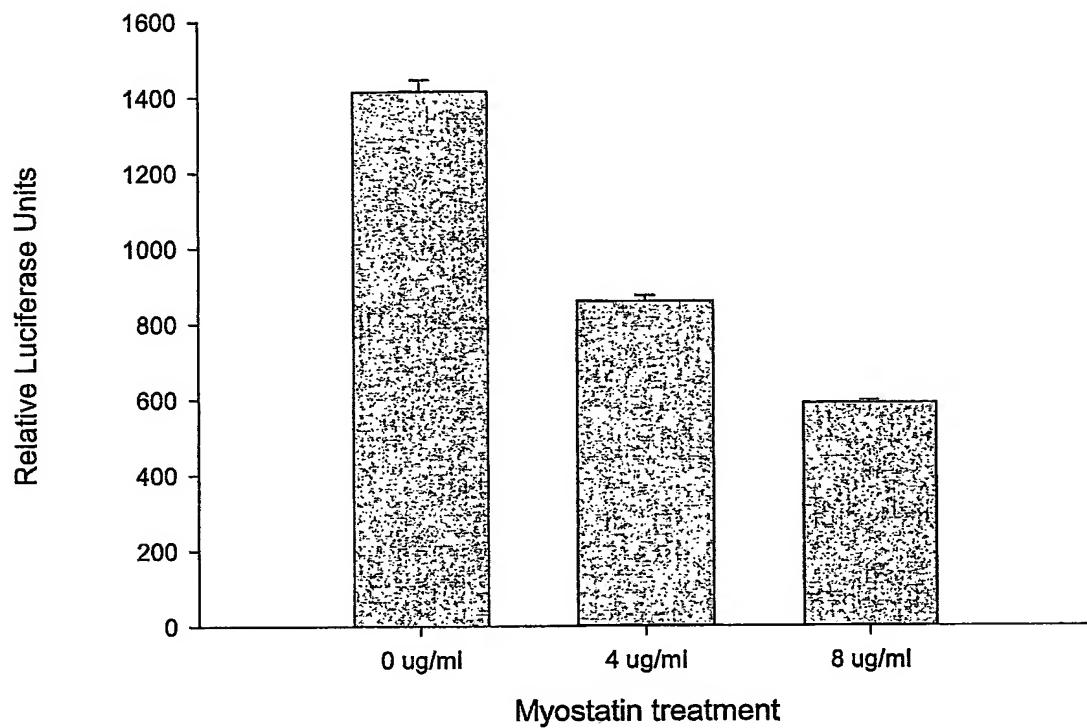


FIGURE 16B.

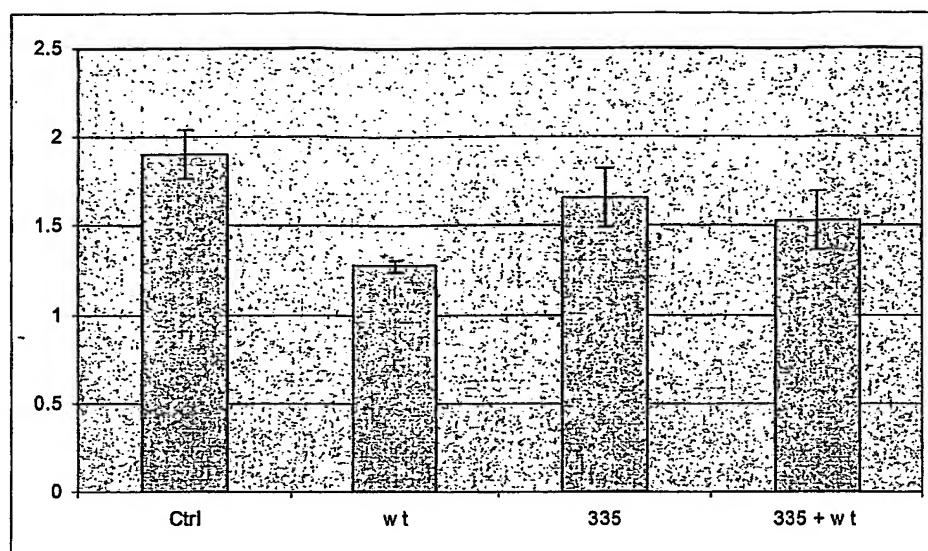
25/28

Luciferase Activity of the 1kb mighty promoter in response  
to increasing myostatin concentrations

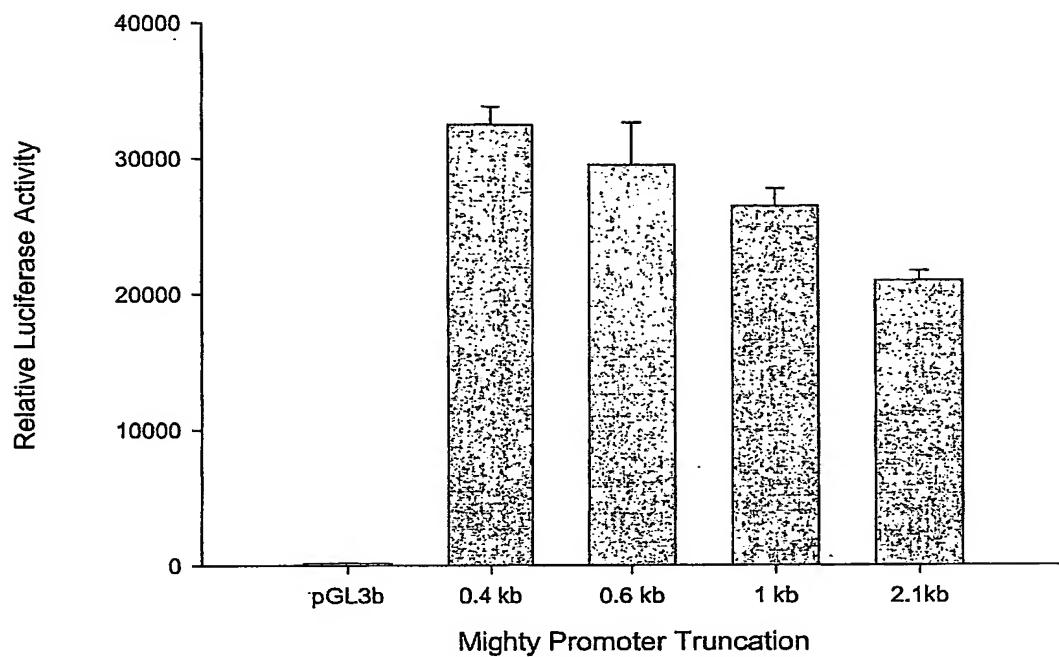
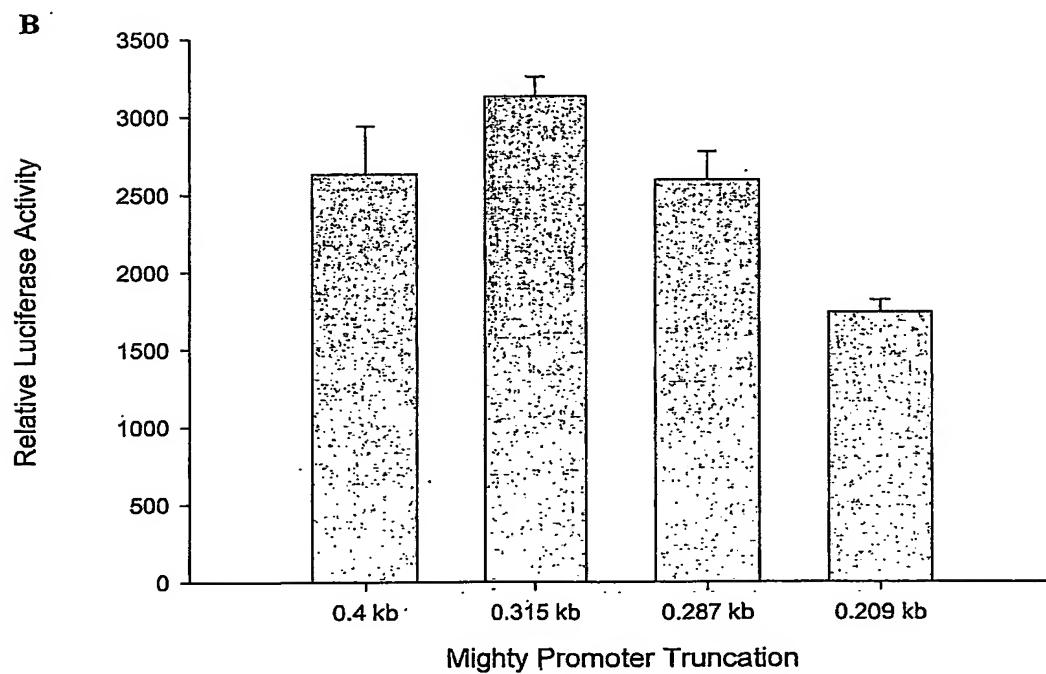


**FIGURE 17**

26/28

**FIGURE 18**

27/28

**A Mighty Promoter Truncations Normalised to beta-Gal Activity****B****FIGURE 19**

28/28



M 1 2 3 4

**FIGURE 20**

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